

Air Quality Permit

Issued To: Fulton Fuel Company
Miners Coulee Compressor Station
127 Main Street
Shelby, Montana 59474

Permit #3128-00
Date Application Received: 8/08/00
Preliminary Determination Issued: 9/11/00
Department Decision Issued: 9/27/00
Final Permit Issued: 10/13/00
AFS # 101-0022

An air quality permit, with conditions, is hereby granted to Fulton Fuel Company (Fulton) pursuant to Sections 75-2-204 and 211, of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM), Title 17, chapter 8, subchapter 7, as amended, for the following:

Section I: Permitted Facilities/Introduction

Plant Location

Permit #3128-00 is issued to Fulton for the operation of the 1100-hp White Superior Engine; 0.096-MMBtu/h Heater; 0.375-MMBtu/h Glycol dehydrator reboiler; and associated equipment at Miners Coulee Natural Gas Compressor Station in the NW¼ of Section 21, Township 36 North, Range 2 East, in Toole County, Montana.

Section II: Limitations and Conditions

A. Emission Limitations

1. Emissions from the 1100-hp White Superior 6GTLE Compressor Engine shall not exceed the following (ARM 17.8.710 and ARM 17.8.715):

NO _x	4.85 lb/hr
CO	7.28 lb/hr
VOC	2.43 lb/hr

2. Fulton shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any sources installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304).
3. Fulton shall not cause or authorize emissions to be discharged into the atmosphere from haul roads, access roads, parking lots, or the general plant property without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).
4. Fulton shall treat all unpaved portions of the access roads, parking lots, and general plant area with fresh water and/or chemical dust suppressant as necessary to maintain compliance with the reasonable precautions limitation (ARM 17.8.710).

B. Testing Requirements

1. Fulton shall test the White Superior 1100-hp compressor engine for NO_x and CO, concurrently, to demonstrate compliance with the NO_x and CO emission limits contained in Section II.A.1. Testing shall be conducted within 180 days of issuance of permit #3128-00 and shall continue on an every-4-year basis or another testing/monitoring schedule as may be approved by the department (ARM 17.8.105 and 17.8.10).
2. All source tests shall be conducted in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
3. The Department of Environmental Quality (department) may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. Fulton shall supply the department with annual production information for all emission points, as required by the department in the annual emission inventory request. The request will include, but is not limited to, all sources of emissions identified in the most recent emission inventory report and sources identified in the permit analysis.

Production information shall be gathered on a calendar-year basis and submitted to the department by the date required in the emission inventory request. Information shall be in the units required by the department. This information may be used for calculating operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

In addition, Fulton shall submit the following information annually to the department by the date specified in the annual emission inventory request. This information may be used for calculating operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

- a. Amount of fuel consumed by the White Superior natural gas compressor engine (corrected to 14.7 psia and 60°F)
 - b. Number of operation-hours per year of this compressor engine
 - c. Number of the reboiler operation-hours per year (or 8760 hours will be used)
 - d. Number of heater operation-hours per year (or 8760 hours will be used)
2. Fulton shall notify the department of any construction or improvement project conducted pursuant to ARM 17.8.705(1)(r) that would include a change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation or the addition of a new emission unit. The notice must be submitted to the department, in writing, 10 days prior to start-up or use of the proposed de minimis change or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change and must include the information requested in ARM 17.8.705(1)(r)(iv) (ARM 17.8.705).
3. All records compiled in accordance with this permit must be maintained by

Fulton as a permanent business record for at least 5 years following the date of the measurement, must be available at the plant site for inspection by the department, and must be submitted to the department upon request (ARM 17.8.710).

SECTION III: General Conditions

- A. Inspection - Fulton shall allow the department's representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment (CEMS, CERMS) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.
- B. Waiver - The permit and all the terms, conditions, and matters stated herein shall be deemed accepted if Fulton fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations - Nothing in this permit shall be construed as relieving Fulton of the responsibility for complying with any applicable federal or Montana statute, rule or standard, except as specifically provided in ARM 17.8.701, *et seq.* (ARM 17.8.717).
- D. Enforcement - Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties or other enforcement as specified in Section 75-2-401, *et seq.*, MCA.
- E. Appeals - Any person or persons jointly or severally adversely affected by the department's decision may request, within 15 days after the department renders its decision, upon affidavit setting forth the grounds therefor, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The department's decision on the application is not final unless 15 days have elapsed and there is no request for a hearing under this section. The filing of a request for a hearing postpones the effective date of the department's decision until the conclusion of the hearing and issuance of a final decision by the Board.
- F. Permit Inspection - As required by ARM 17.8.716, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by department personnel at the location of the permitted source.
- G. Permit Fees - Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay the annual operation fee by Fulton may be grounds for revocation of this permit, as required by that Section and rules adopted thereunder by the Board.

Permit Analysis
Fulton Fuel Company
Permit #3128-00

I. Introduction/Process Description

A. Permitted Equipment

The facility consists of the following equipment:

- (1) 1979 White Superior 6GTL 1100-hp compressor engine;
- (1) Dehydrator, 0.375 MMBtu/hr;
- (1) 0.096-MMBtu/hr Heater; and
- (1) Methanol tank 250 bbls

B. Process Description

Fulton Fuel Company (Fulton) compresses pipeline gas for further transport to major market areas. This facility also removes the moisture from the gas during the process. This is accomplished with a dehydrator, also commonly called a reboiler or glycol unit.

C. Current Permit Action

On August 8, 2000, Fulton submitted an application for a preconstruction permit to operate a natural gas compressor station. This facility has been operating since 1980.

This application resulted in the issuance of permit #3128-00.

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from the Department of Environmental Quality (department). Upon request, the department will provide references for locations of complete copies of all applicable rules and regulations or copies where appropriate.

A. ARM Title 17, chapter 8, subchapter 1, General Provisions, including, but not limited to:

- 1. ARM 17.8.101 Definitions. This section includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
- 2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emissions of any air contaminant into the outdoor atmosphere shall, upon written request of the department, provide the facilities and necessary equipment, including instruments and sensing devices, and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the department.

3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the department, any source, or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq.*, MCA.

Fulton shall comply with the requirements contained in the Montana Source Test Protocol and Procedures Manual, including but not limited to, using the proper test methods and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from the department upon request.

4. ARM 17.8.110 Malfunctions. (2) The department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation, or to continue for a period greater than 4 hours.
5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant which would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner that a public nuisance is created.

B. ARM Title17, chapter 8, subchapter 2, Ambient Air Quality, including, but not limited to:

1. ARM 17.8.204 Ambient Air Monitoring,
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide,
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide,
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide,
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone,
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide,
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter,
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility,
9. ARM 17.8.222 Ambient Air Quality Standard for Lead, and
10. ARM 17.8.223 Ambient Air Quality Standard for PM₁₀.

Fulton must maintain compliance with the applicable ambient air quality standards.

C. ARM Title17, chapter 8, subchapter 3, Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged to an outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.
2. ARM 17.8.308 Particulate Matter, Airborne. (1) This section requires an opacity

limitation of 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate. (2) Under this section, Fulton shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.

3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This section requires that no person shall cause, allow, or permit to be discharged into the atmosphere, particulate matter caused by the combustion of fuel in excess of the amount determined by this section.
 4. ARM 17.8.310 Particulate Matter, Industrial Process. This section requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter in excess of the amount set forth in this section.
 5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. Commencing July 1, 1971, no person shall burn any gaseous fuel containing sulfur compounds in excess of 50 grains per 100 cubic feet of gaseous fuel, calculated as hydrogen sulfide at standard conditions. Fulton will consume pipeline-quality natural gas in the compressor engines, the dehydration unit, and the space heaters to meet this limitation.
 6. ARM 17.8.324(3) Hydrocarbon Emissions--Petroleum Products. No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such a tank is equipped with a vapor loss control device as described in (1) of this rule, or is a pressure tank as described in (1) of this rule.
 7. ARM 17.8.340 Standard of Performance for New Stationary Sources. This section incorporates, by reference, 40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). Fultons' Miners Coulee Field compressor station is not an NSPS affected source because it does not meet the definition of a natural gas processing plant defined in 40 CFR Part 60, subpart KKK.
- D. ARM Title17, chapter 8, subchapter 5, Air Quality Permit Application, Operation and Open Burning Fees, including, but not limited to:
1. ARM 17.8.504 Air Quality Permit Application Fees. This section requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the department. Fulton has submitted the appropriate application fee.
 2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee

must, as a condition of continued operation, be submitted to the department by each source of air contaminants holding an air quality permit, excluding an open burning permit, issued by the department; and the air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions which pro-rate the required fee amount.

- E. ARM Title 17, chapter 8, subchapter 7, Permit, Construction and Operation of Air Contaminant Sources, including, but not limited to:
1. ARM 17.8.701 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
 2. ARM 17.8.704 General Procedures for Air Quality Preconstruction Permitting. This air quality preconstruction permit contains requirements and conditions applicable to both construction and subsequent use of the permitted equipment.
 3. ARM 17.8.705 When Permit Required--Exclusions. This rule requires a facility to obtain an air quality permit or permit alteration if they construct, alter, or use an air contaminant source which has the potential to emit more than 25 tons per year of any pollutant. Fulton has the potential to emit more than 25 tons per year of NO_x, and CO; therefore, a permit is required.
 4. ARM 17.8.706 New or Altered Sources and Stacks--Permit Application Requirements. This rule requires that an application for an air quality permit be submitted for a new or altered source or stack. Fulton has submitted a permit application as required.
 5. ARM 17.8.710 Conditions for Issuance of Permit. This section requires that Fulton demonstrate compliance with applicable rules and standards before a permit can be issued. Also, a permit may be issued with such conditions as are necessary to assure compliance with all applicable rules and standards. Fulton has demonstrated compliance with applicable rules and standards as required for permit issuance.
 6. ARM 17.8.715 Emission Control Requirements. This section requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that Best Available Control Technology (BACT) shall be utilized. The required BACT analysis is included in Section III of this permit analysis.
 7. ARM 17.8.716 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the department at the location of the

source.

8. ARM 17.8.717 Compliance with Other Statutes and Rules. This rule states that nothing in the permit shall be construed as relieving Fulton of the responsibility for complying with any applicable federal or Montana statute, rule or standard, except as specifically provided in ARM 17.8.101, *et seq.*
 9. ARM 17.8.720 Public Review of Permit Applications. This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. Fulton has submitted proof of compliance with the public notice requirement.
 10. ARM 17.8.731 Duration of Permit. An air quality permit shall be valid until revoked or modified as provided in this subchapter, except that a permit issued prior to construction of a new or altered source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.
 11. ARM 17.8.733 Modification of Permit. An air quality permit may be modified for changes in any applicable rules and standards adopted by the board or changed conditions of operation at a source or stack which do not result in an increase in emissions because of those changed conditions. A source may not increase its emissions beyond those found in its permit unless the source applies for and receives another permit.
 12. ARM 17.8.734 Transfer of Permit. This section states an air quality permit may be transferred from one person to another if written notice of intent to transfer, including the names of the transfer and the transferee, is sent to the department.
- F. ARM Title17, chapter 8, subchapter 8, Prevention of Significant Deterioration of Air Quality, including, but not limited to:
1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.
 2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through 17.8.827 shall apply to any major stationary source and any major modification, with respect to each pollutant subject to regulation under the Federal Clean Air Act (FCAA) that it would emit, except as this subchapter would otherwise allow
- This facility is not a listed source and does not meet the definition of a major source under the PSD rules.
- G. ARM Title17, chapter 8, subchapter 12, Operating Permit Program, including, but not limited to:

1. ARM 17.8.1201 Definitions. (23) Major Source under section 7412 of the FCAA is defined as any stationary source having:
 - a.
 - i. Potential To Emit (PTE) > 10 tons per year of any one HAP, or
 - ii. PTE > 25 tons per year of a combination of all HAPS, or
 - iii. Lesser quantity as the department may establish by rule.
 - b. PTE > 100 tons per year of any pollutant.
 - c. Sources with the PTE > 70 tons per year of PM-10 in a serious PM-10 non-attainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program Applicability. (1) Title V of the FCAA of 1990 requires that all sources, as defined in ARM 17.8.1204 (1), obtain a Title V Operating Permit. In reviewing and issuing Air Quality Permit #3128-00 for Fultons' Miners Coulee Compressor Station, the following conclusions were made:
 - a. This source is not located in a serious PM-10 non-attainment area.
 - b. This facility is not subject to any current NSPS.
 - c. This facility is not subject to any current NESHAP standards.
 - d. This source is not a Title IV affected source nor a solid waste combustion unit.
 - e. This source is not a "major source" as designated by Title V.

Based on these facts, the department has determined that the Miners Coulee Field compressor station will be a minor source of emissions as defined under Title V.

III. Best Available Control Technology Determination

A BACT determination is required for each new or altered source. Fulton shall install on the new or altered source the maximum air pollution control capability which is technically practicable and economically feasible, except that BACT shall be utilized. The BACT analysis addressed five alternatives for controlling NO_x, CO and VOC emissions from the 1100-hp White Superior compressor engine. The department has reviewed previous BACT determinations for compressor engines before making the following BACT determination.

A. Non-Selective Catalytic Reduction (NSCR) Unit

An NSCR unit controls NO_x emissions by using the CO and the residual hydrocarbons in the exhaust of a rich-burn engine as a reducing agent for NO_x. Without the catalyst, in the presence of oxygen, the hydrocarbons will be oxidized instead of reacting with NO_x. As the excess hydrocarbons and NO_x pass over a honeycomb or monolithic catalyst (usually a combination of noble metals such as platinum, palladium, and/or rhodium), the reactants are reduced to N₂, H₂O, and CO₂. The noble metal catalyst

usually operates between 800° F and 1,200° F; therefore, the unit would normally be mounted near the engine exhaust to maintain a high enough temperature to allow the various reactions to occur. In order to achieve maximum performance, 80 to 90% reduction of NO_x concentration, the engine needs to burn a rich fuel mixture – causing the engine to operate less efficiently. Fulton may choose this technology to control emissions of NO_x, CO, and VOC; however, the emission levels must meet the limitations specified in this permit (Section II.A.1).

B. NSCR unit with an Air/Fuel Ratio (AFR) Controller

In order to provide for the most effective use of the above catalyst, it is necessary to install an electronic AFR controller. This device maintains the proper air/fuel ratio that will optimize the degree of reducing agents in order to provide maximum emission reduction while minimizing agents that can poison the catalyst.

NSCR/AFR control equipment typically constitutes BACT for many compressor engines. This technology effectively reduces NO_x and CO emissions and is an economically and environmentally feasible option. Fulton may choose this technology to control emissions of NO_x, CO, and VOC; however, the emission levels must meet the limitations specified in this permit (Section II.A.1).

C. Clean-Burn Engine

The clean-burn (a.k.a. “lean-burn” or “lean-emissions”) engine uses a precombustion chamber to enclose a rich mixture of air and fuel -- the mixture is then ignited in this chamber. The resulting ignition front then fires into the larger main cylinder that contains a much leaner fuel mixture. Staging the combustion and burning a leaner fuel mixture results in lowering of peak flame temperatures. Lower combustion temperature assures lower NO_x concentration in the exhaust gas stream; however, excess air in the fuel/air mixture can result in increased CO emissions.

The NO_x and CO emissions from a clean-burn engine can be stabilized by installing an electronic AFR controller. This device maintains the proper air/fuel ratio that will optimize the performance of the clean-burn engine. A clean-burn engine with an AFR controller achieves approximately the same reduction in emissions as a rich-burn engine fitted with an NSCR unit and an AFR controller. The clean-burn engine has a higher initial cost than a rich-burn engine with an NSCR unit; however, since there is no add-on equipment, the clean-burn option requires far less maintenance than an NSCR unit. Fulton may choose this technology to control emissions of NO_x, CO, and VOC; however, the emission levels must meet the limitations specified in this permit (Section II.A.1).

D. NO_x Control at the Crossover Point using an Air/Fuel Ratio Controller

In this process, the proper air/fuel ratio is obtained by adjusting the engine to operate at the crossover point, where NO_x and CO emissions are equal. At the crossover point, the engine operates neither too lean nor too rich. Excess hydrocarbons in a rich fuel mixture cause incomplete combustion; thus lower the exhaust temperature to a point where concentration of NO_x decreases, but the concentration of CO increases. Combustion of a lean fuel mixture occurs at higher temperatures, accompanied by a higher concentration of NO_x, but the CO concentration decreases. Operating at the crossover point can limit both NO_x and CO emissions for lower power engines.

It is possible to consistently operate an engine at the crossover point by installing an electronic AFR controller that senses the oxygen concentration in the exhaust. An engine can operate manually at the crossover point; however, the engine must be tuned frequently to account for operational changes such as varying engine load, operating temperature, fuel gas quality, etc. The department has determined that installation and operation of an electronic AFR controller does not constitute BACT in this case.

E. No Additional Controls

This practice has no economic impacts on Fulton. It may, however, have negative impacts on the air quality due to the actual and potential emissions from the sources. Therefore, the department has determined that this option does not constitute BACT in this case.

The control options selected will require control equipment and control costs comparable to other recently permitted similar sources and are capable of achieving the appropriate emission standards.

IV. Emission Inventory

Source	Tons per year*					
	TSP	PM-10	NO _x	VOC	SO _x	CO
1979 White Superior 1100-hp Compressor Engine	0.409	0.409	21.25	10.62	0.025	31.87
ALCO Dehydrator Reboiler and Still Vent	0.001	0.001	0.02	0.001	0.000	13.80
Natural Gas-Fired Heater	1.310	1.310	43.80	2.300	0.260	8.76
Total	1.72	1.72	65.07	12.921	0.285	54.43

1100-hp Superior Compression Engine 8GTL

Power 1100 bhp

Number of Hours of Operation = 8760h/yr

Fuel Consumption 8500 Btu/hp-h = 8.5 exp-3 MMBtu/hp-h

Natural Gas Heat Content = 1000 MMBtu/MMSCF

Calculated Yearly Fuel Usage = 8.5 exp-3 MMBtu/hp-h * 8760 h/yr * 1100 hp / 1000 MMBtu/MMSCF = 81.906 MMSCF/yr

TSP Emissions

The emission factor for the TSP is the same as for PM-10. No particles of size greater than 10 microns are expected to be associated with the emissions from this engine.

PM-10 Emissions

Emission Factor: 10.0 lb/MMSCF (Fire Version 5.0, 8/95 2-02-002-02)

* The values in the table are rounded off. See calculations for details.

Control Efficiency: 0%

Calculations: $E(\text{PM-10}) = 10.0 \text{ lb/MMSCF} * 81.906 \text{ MMSCF/yr} * 0.0005 \text{ ton/lb} = 0.409 \text{ ton/yr}$.

NO_x Emissions:

Emission Factor: 2.0 g/hp-hr (Revised BACT Guidelines, 12/13/93)

Control: 0%

Calculations: $E(\text{NO}_x) = 2.0 \text{ g/hp-h} * 1100 \text{ hp} * 8760 \text{ h/yr} * 0.002205 \text{ lb/g} * 0.0005 \text{ ton/lb} = 21.25 \text{ ton/yr}$

CO Emissions:

Emission Factor: 3.0 g/hp-h (Revised BACT Guidelines, 12/13/93)

Control: 0%

Calculations: $E(\text{CO}) = 3.0 \text{ g/hp-h} * 1100 \text{ hp} * 8760 \text{ h/yr} * 0.002205 \text{ lb/g} * 0.0005 \text{ ton/lb} = 31.87 \text{ ton/yr}$

SO_x Emissions

Emission Factor: 0.6 lb/MMSCF (Fire Version 5.0, 8/95 2-02-002-02)

Control: 0%

Calculations: $E(\text{SO}_x) = 0.6 \text{ lb/MMSCF} * 81.906 \text{ MMSCF/yr} * 0.0005 \text{ ton/lb} = 0.0246 \text{ ton/yr}$

VOC Emissions:

Emission Factor: 1.0 g/bhp-h (Revised BACT Guidelines, 12/13/93)

Control: 0%

Calculations: $E(\text{VOC}) = 1.0 \text{ g/hp-hr} * 1100 \text{ hp} * 8760 \text{ h/yr} * 0.002205 \text{ lb/g} * 0.0005 \text{ ton/lb} = 10.62 \text{ ton/y}$

Glycol Dehydrator Reboiler and Still Vent 0.375 MMBtu/h:

Fuel Combustion Rate = 0.375 MMBtu/h

Numbers of Hours of Operation = 8760 h/yr

Heat Content of Natural Gas = 000 MMBtu/MMSCF

Fuel usage: $0.375 \text{ MMBtu/h} / 1000 \text{ MMBtu/MMSCF} = 3.75 \text{ exp-4 MMSCF/h}$

TSP Emissions:

TSP emission will be equal to the PM-10 emissions, because no particles larger than 10 microns in diameter are expected to be emitted from this reboiler.

PM-10 Emissions:

Emission Factor: 7.6 lb/MMSCF (AP 42 Table 1.4-2; 7/98)

Control: 0%

Calculations: $E(\text{PM-10}) = 7.6 \text{ lb/MMSCF} * 3.75 \text{ exp-5 MMSCF/h} * 8760 \text{ h/yr} * 0.0005 \text{ ton/lb} = 0.00125 \text{ ton/yr}$

NO_x Emissions:

Emission Factor: 100,000 lb/MMSCF (AP 42 Table 1.4-2; 7/98)

Control: 0%

Calculations: $100,000 \text{ lb/MMSCF} * 3.75 \text{ exp-5 MMSCF/h} * 8760 \text{ h/yr} * 0.0005 \text{ ton/lb} = 0.02 \text{ ton/yr}$

VOC Emissions:

Emission Factor: 5.5 lb/MMSFC (AP 42 Sec.1.4-2, 3/98)

Control: 0%

Calculations: $5.5 \text{ lb/MMSFC} * 3.75 \text{ exp-5 MMSCF/h} * 8760 \text{ h/yr} * 0.0005 \text{ ton/lb} = 0.0009 \text{ ton/yr}$

SO_x Emissions:

Emission Factor: 0.6 lb/MMSCF (AP 42 Sec.1.4-2, 3/98)

Control: 0%

Calculations: $0.6 \text{ lb/MMSCF} * 3.75 \text{ exp-5 MMSCF/h} * 8760 \text{ h/yr} * 0.0005 \text{ ton/lb} = 0.0001 \text{ ton/yr}$

CO Emissions:

Emission Factor: 84,000 lb/MMSCF (AP 42 Sec.1.4-2, 3/98)

Control: 0%

Calculations: $84,000 \text{ lb/MMSCF} * 3.75 \text{ exp-5 MMSCF/h} * 8760 \text{ h/yr} * 0.0005 \text{ ton/lb} = 13.80 \text{ ton/yr}$

Natural Gas Heater

Maximum Heat Generation = 100 MMBtu/hr

Numbers of Hours of = 8760 h/yr
Heat Content of Natural Gas = 1000 MMBtu/MMSCF
Fuel usage: 100 MMBtu/h / 1000 MMBtu/MMSCF = 0.1 MMSCF/h

TSP Emissions:

TSP emission will be equal to the PM-10 emissions, because no particles larger than 10 microns in diameter are expected to be emitted from reboiler

PM-10 Emissions:

Emission Factor: 3.0 lb/MMSCF (Fire Version 5.0, SCC 10500106; 9/95)

Control: 0%

Calculations: 3.0 lb/MMSCF * 0.1 MMSCF/h * 8760 h/yr * 0.0005 ton/lb = 1.31 ton/yr

NO_x Emissions:

Emission Factor: 100.00 lb/MMSC (Fire Version 5.0, SCC 10500106; 9/95)

Control: 0%

Calculations: 100.00 lb/MMSC * 0.1 MMSCF/h * 8760 h/yr * 0.0005 ton/lb = 43.8 ton/yr

VOC Emissions:

Emission Factor: 5.3 lb/MMCSF (Fire Version 5.0, SCC 10500106; 9/95)

Control: 0%

Calculations: 5.3 lb/MMCSF * 0.1 MMSCF/h * 8760 h/yr * 0.0005 ton/lb = 2.3 ton/yr

SO_x Emissions:

Emission Factor: 0.60 lb/MMSCF (Fire Version 5.0, SCC 10500106; 9/95)

Control: 0%

Calculations: 0.60 lb/MMSCF * 0.1 MMSCF/h * 8760 h/yr * 0.0005 ton/lb = 0.26 ton/yr

CO Emissions:

Emission Factor: 20.00 lb/MMSCF (Fire Version 5.0, SCC 10500106; 9/95)

Control: 0%

Calculations: 20.00 lb/MMSCF * 0.1 MMSCF/h * 8760 h/yr * 0.0005 ton/lb = 8.76 ton/yr

V. Air Quality and Monitoring Requirements

The air quality classification for the area is "Better than National Standards" or unclassifiable attainment for the National Ambient Air Quality Standards for criteria pollutants. There are no non-attainment areas within a reasonable distance of the site. The department believes there will not be a violation of any ambient air quality standards by this facility.

VI. Taking or Damaging Implication Analysis

As required by 2-10-101 to 105, MCA, the department has conducted a private property taking and damaging assessment and has determined there are no taking or damaging implications.

VII. Environmental Assessment

An environmental assessment, required by the Montana Environmental Policy Act, was completed for this project. A copy is attached.

DEPARTMENT OF ENVIRONMENTAL QUALITY
Permitting and Compliance Division
Air and Waste Management Bureau
1520 East Sixth Avenue
P.O. Box 200901, Helena, Montana 59620-0901
(406) 444-3490

FINAL ENVIRONMENTAL ASSESSMENT (EA)

Issued For: Fulton Fuel Company,
127 Main Street,
Shelby, MT 59474
Permit Number: 3128-00

Preliminary Determination Issued: 09/11/00
Department Decision Issued: 09/27/00
Final Permit Issued: 10/13/00

1. Legal Description of Site: Miners Coulee Field Gas Compressor Station and associated equipment are located in the NW¼ of Section 21, Township 36 North, Range 2 East, in Toole County, Montana.
2. Description of Project: Fulton is proposing to permit an existing natural gas compressor station facility.
3. Objectives of Project: To initiate Fulton's compliance with the ARM Title 17, chapter.8 subchapter 7.
4. Alternatives Considered: The no action alternative was considered. The Department of Environmental Quality believes that Fulton would be in compliance with the applicable rules and laws, while operating under limitations and conditions of this permit, therefore, the no action alternative is not considered to be appropriate and it is eliminated from further consideration.
5. A listing of mitigation, stipulations and other controls: A list of enforceable conditions, including a best available control technology analysis, is contained in permit #3128-00.
6. Regulatory effects on private property: The department has considered alternatives to the conditions imposed in this permit as part of permit development. The department has determined that the permit conditions are reasonably necessary to ensure compliance with applicable requirements and demonstrate compliance with those requirements and not unduly restrict private property rights.

7. The following table summarizes the potential physical and biological effects of the proposed project on the human environment. The "no action alternative" was discussed previously.

		Major	Moderate	Minor	None	Unknown	Comments Included
A	Terrestrial and Aquatic Life and Habitats				x		
B	Water Quality, Quantity, and Distribution				x		
C	Geology and Soil Quality, Stability, and Moisture				x		
D	Vegetation Cover, Quantity, and Quality				x		
E	Aesthetics				x		
F	Air Quality				x		
G	Unique Endangered, Fragile, or Limited Environmental Resource				x		
H	Demands on Environmental Resource of Water, Air, and Energy				x		
I	Historical and Archaeological Sites				x		
J	Cumulative and Secondary Impacts				x		

SUMMARY OF COMMENTS ON POTENTIAL PHYSICAL AND BIOLOGICAL EFFECTS:

The following comments have been prepared by the department.

- A. Terrestrial and Aquatic Life and Habitats: No impact on terrestrial habitat is expected from the proposed project. The facility is not in a vicinity of any water body, except the seasonal small surface drainage (personal communication with Mark Hesla, station manager).
- B. Water Quality, Quantity, and Distribution: The proposed project would not change the water quality. The existing station currently does not impact groundwater and is not located in the vicinity of any water source.
- C. Geology and Soil Quality, Stability, and Moisture: The issuance of the permit would not cause construction of any additional structures; therefore, there would be no impact on the soil quality, stability, moisture, or geology.
- D. Vegetation Cover, Quantity, and Quality: Issuance of this permit would not cause changes in vegetation cover, its quantity, or its quality.
- E. Aesthetics: There would be no physical changes to the environment as a result of issuing this permit; therefore, there would be no impact on aesthetics resulting from issuance of this permit.
- F. Air Quality: Issuing the permit would result in placing conditions and limitations on the emissions from this facility. The limitations would assure that the air quality meets ambient standards. No additional impact on air quality would be expected from this project.

- G. Unique Endangered, Fragile, or Limited Environmental Resources: Issuance of this permit would not increase any activities at the location of the compressor station. Therefore, this action would not result in a potential threat to unique, endangered, fragile, or limited environmental resources. According to the Montana Natural Heritage program there are no known endangered, fragile species within a one-mile radius of this facility.
- H. Demands on Environmental Resource of Water, Air, and Energy: Issuance of this permit would not increase the demands on environmental resource of water, air, and energy.
- I. Historical and Archaeological Sites: The issuance of this permit would not result in any physical change to the site. Therefore, no impact on historical or archeological sites would be observed as a result of the issuance of this permit. The Montana Historical Society, Historic Preservation Office, indicated there were no known historical or archeological sites in the same section as this compressor station.
- J. Cumulative and Secondary Impacts: No cumulative or secondary impacts are expected to result from this project.

8. The following table summarizes the potential social and economic effects of the proposed project on the human environment. The "no action alternative" was discussed previously.

		Major	Moderate	Minor	None	Unknown	Comments Included
A	Social Structures and Mores				x		
B	Cultural Uniqueness and Diversity				x		
C	Local and State Tax Base and Tax Revenue				x		
D	Agricultural or Industrial Production			x			
E	Human Health				x		
F	Access to and Quality of Recreational and Wilderness Activities				x		
G	Quantity and Distribution of Employment				x		
H	Distribution of Population				x		
I	Demands for Government Services			x			
J	Industrial and Commercial Activity			x			
K	Locally Adopted Environmental Plans and Goals				x		
L	Cumulative and Secondary Impacts				x		

SUMMARY OF COMMENTS ON POTENTIAL SOCIAL AND ECONOMIC EFFECTS:

The following comments have been prepared by the department:

- A. Social Structures and Mores: The issuance of the permit would not have any impact on social structures or mores.
- B. Cultural Uniqueness and Diversity: No impact on cultural uniqueness or diversity would be associated with the issuance of this permit for the existing facility.

- C. Local and State Tax Base and Tax Revenue: No changes in the local or state tax base or tax revenue would result from the issuance of this permit. Permitting the existing facility is not expected to change the number of employees.
- D. Agricultural or Industrial Production: The action of issuing a permit would not have any impact on agricultural production. However, in order to comply with the emission limitations, Fulton may need to limit production. The potential limitation of the production would have a minimal impact on the total industrial production of the area.
- E. Human Health: There would be no impact on human health from issuing this permit.
- F. Access to and Quality of Recreational and Wilderness Activities: Issuance of this permit would not result in any changes in access to and quality of recreational and wilderness activities.
- G. Quantity and Distribution of Employment: No new employees would be hired as a result of issuing this permit.
- H. Distribution of Population: The distribution of population would not change as a result of issuing of this permit.
- I. Demands of Government Services: Only minimal demands of government services would be expected. The department would spend minimal time verifying compliance with the permit conditions.
- J. Industrial and Commercial Activity: Minimal impact on Fulton production may result from tasks associated with compliance assurance.
- K. Locally Adopted Environmental Plans and Goals: The department is not aware of any locally adopted environmental plans that would be affected by issuing this permit.
- L. Cumulative and Secondary Impacts: No cumulative or secondary impacts are expected to result from this project.

Recommendation: An EIS is not required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: The impacts resulting from this project are expected to be minimal.

Other groups or agencies contacted or which may have overlapping jurisdiction: None

Individuals or groups contributing to this EA: Mark Hesla of Fulton, Terrence Godin, Montana Historical Society, Historic Preservation Office, Margaret Beer of Natural Heritage Program.

EA prepared by: Joanna Rosinska

Date: 08/23/00